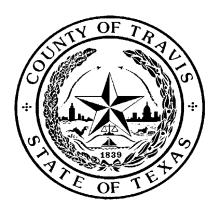
OLDER ADULTS in travis county

nerican community survey 3-year estimates 2010 - 2012



ABOUT THE AUTHORS

This report was researched and written by the staff at the Travis County Health and Human Services & Veterans Service Department (HHS/VS), Research & Planning Division. The lead writer was Amber Joiner-Hill, with contributing help from Rachel Coff and Korey Darling, and with the support of Sherri E. Fleming (County Executive for Travis County HHS/VS) and Blanca Tapia Leahy (Division Director).

Travis County HHS/VS strives to maximize quality of life for all people in Travis County. We work to protect vulnerable populations, promote healthy living and build a shared understanding of our community. We address community needs by investing in social and economic well-being through internal and external investments and services.

The Research & Planning Division works to inform our community, find solutions, and ensure effectiveness. Through these roles we seek to improve knowledge and understanding of community needs, create comprehensive solutions to community problems, and improve the effectiveness and efficiency of the service delivery system in Travis County. To learn more about our work and for links to our other publications please visit: www.traviscountytx.gov/rp.

QUESTIONS OR COMMENTS?

For questions or for more information, please contact the Research & Planning Division at HHS_R&P@co.travis.tx.us.

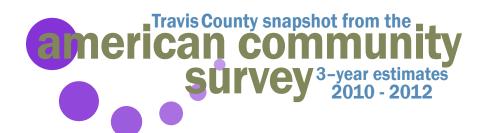


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INTRODUCTION

OVERVIEW

This report uses the U.S. Census Bureau's American Community Survey (ACS) 2010-2012 3-Year Estimates to provide a point-in-time snapshot of the older adult population in Travis County. We have chosen to use one data set rather than a variety of sources. While this has allowed us the opportunity to create a user-friendly tool for understanding and utilizing the ACS data, we recognize the limitations in using a single data source to report on the characteristics of a population.

We hope this information is helpful in efforts to design and improve programs, inform or make funding decisions, and shape local policies that support and improve the lives of older adults in our community. We encourage users to borrow and cite this material.

Suggested Citation: Research & Planning Division, "Focus on Older Adults in Travis County," Travis County Health and Human Services & Veterans Service, 2014.

THE DATA SOURCE: AMERICAN COMMUNITY SURVEY 3-YEAR ESTIMATES

Below are some brief methodological notes to assist the reader in understanding the limitations of or nuances with the data presented in the report. For a more detailed methodology, please see page 23.

Estimates

ACS data sets are released as period estimates that represent the characteristics of the population and housing over data collections of 12 months (1-Year Estimates), 36 months (3-Year Estimates), or 60 months (5-Year Estimates). Most of this report utilizes the ACS 2010-2012 3-Year Estimates data set, which was selected because it provides the best balance of reliability and timeliness. The data used to create the maps is from the ACS 2008-2012 5-Year Estimates because only 5-year period estimates include data for ZIP code tabulation areas. Also, population projection data sets from the Decennial Census and Texas State Data Center are used to explore population change over time and cited accordingly.

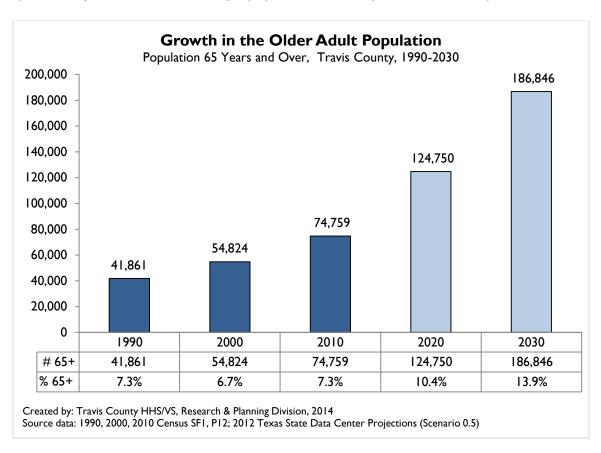
All of the estimates presented in this report have been tested at a 90% confidence level for reliability. When direct comparisons are made in the narrative, tests have been performed for statistical significance. For more information on statistical testing, please see the Methodology section at the end of this report.

Universes

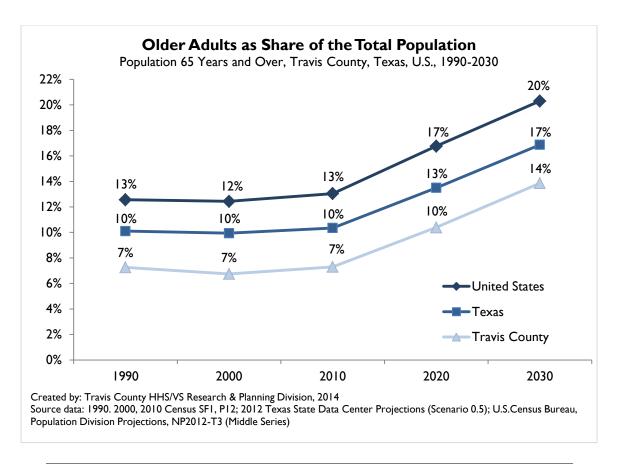
The universe describes the population represented in a given data set. For many of the charts and tables included in this report, the universe is older adults 65 years and over in Travis County and the population represented (N) is the approximate total number of older adults in Travis County (80,410). In other charts and tables, the universe and population represent a subset of the older adult population. In one instance, the age cohort is expanded slightly (60 years and over), because of the data available. It is important to pay close attention to the universe when using or comparing the data in the charts and tables.

POPULATION TRENDS

During the past 20 years, the Travis County population aged 65 and over has grown by 79% (from roughly 42,000 older adults in 1990 to nearly 75,000 in 2010). The growth rate among the older adult population mirrors the rate of growth of the county population overall (the total Travis County population grew by 78% between 1990 and 2010). Older adults have comprised about 7% of the Travis County population during the past 20 years. However, the older adult population is projected to grow by 150% between 2010 and 2030 and will begin to comprise a larger share of the county's population—10% by 2020 and 14% by 2030.



While the overall trendline for growth in the county's older adult population is similar to state and national scenarios, the older adult population in Travis County makes up a smaller share of overall population in comparison to state and national figures. This is true for the most current figures (older adults made up 7% of the Travis County population in 2010 compared with 10% of the Texas population and 13% of the U.S. population), as well as for historical estimates and projections (see following chart). However, as shown in the following table, Travis County does outpace the state and the nation in terms of the rate of growth of its older adult population.



Older Adult Population and Percent Change Over Time					
Population 65 Years and Over, Travis County, Texas and U.S., 1990-2030					
Older Adult Population Percent Change					
	1990	2010	2030	1990 to 2010	2010 to 2030
Travis County	41,861	74,759	186,846	79%	150%
Texas	1,716,576	2,601,886	5,553,749	52%	113%
United States	31,241,831	40,267,984	72,774,000	29%	81%

Created by: Travis County HHS/VS Research & Planning Division, 2014

Source data: 1990. 2000, 2010 Census SF1, P12; 2012 Texas State Data Center Projections (Scenario 0.5);

U.S. Census Bureau, Population Division Projections, NP2012-T2 (Middle Series)

TREND DATA SOURCE

Long-term trend and projection data are not available through the American Community Survey, so this section of the report relies on alternative data sources.

Data for 1990, 2000, and 2010 was obtained from the Decennial Census, which is conducted by the U.S. Census Bureau and surveys every household in America once every ten years in order to provide Congress with an official count of the entire U.S. population. Prior to 2010, the Decennial Census included a long survey form, covering a great depth of information. This more descriptive social, economic, and housing information is now collected through the American Community Survey, and the 2010 Census was redesigned to contain only ten simple questions related to basic population counts and demographic characteristics, such as sex, age,

race, Hispanic origin, household size, and homeowner status. Because the Decennial Census surveys every household in the U.S. at the same time, it is said to describe 100-percent characteristics. For this reason, the Decennial Census is considered a highly reliable source of data that lends itself to measuring overall population growth.

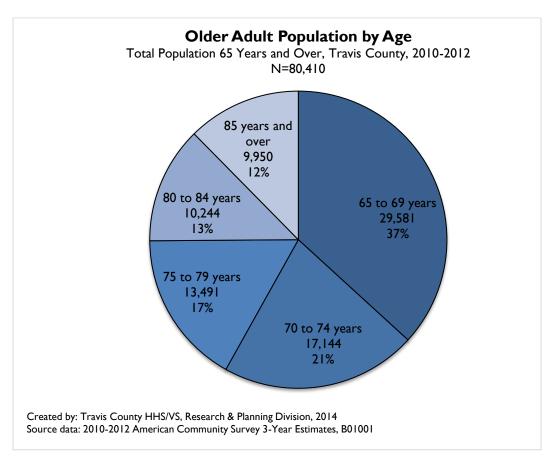
Data for 2020 and 2030 was obtained using U.S. Census Bureau (for U.S. figures) and Texas State Data Center (for Texas and Travis County figures) population projections. Population projections are estimates of the population for future dates. Both sets of population projections start with a base of 2010 Census figures and apply a methodology that accounts for births, deaths, and migration. Several sets of population values are available utilizing alternative scenarios. Based on broad guidance provided by the Texas State Data Center and U.S. Census Bureau, the 0.5 migration scenario was used for the state and county projections and the middle series data set was used for the national projections. For further information about the methodology for the U.S. populations projections see:

https://www.census.gov/population/projections/data/national/2012.html.

For further information about the methodology for the Texas and Travis County projections see: http://txsdc.utsa.edu/data/TPEPP/Projections/Index.aspx.

AGE & SEX

An estimated 80,410 adults aged 65 and over live in Travis County. The majority of older adults (37%) are between the ages of 65 and 69 years old and the next largest age group (21%) includes adults 70 to 74 years old. Older adults comprise 8% of the Travis County total population, compared to 11% of Texas' total population, and 13% of the United States' total population.

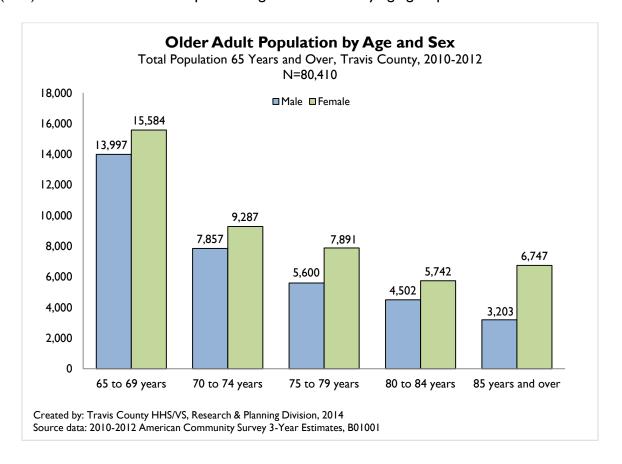


Older Adult Population by Age Travis County, Texas, and U.S., 2010-2012				
Age	Travis County	Texas	United States	
65 to 69 years	37%	33%	31%	
70 to 74 years	21%	24%	23%	
75 to 79 years	17%	18%	18%	
80 to 84 years	13%	13%	14%	
85 years and over	12%	12%	14%	
Total 65 years and over	80,410	2,722,520	41,652,359	

Created by: Travis County HHS/VS, Research & Planning Division, 2014

Source data: 2010-2012 American Community Survey 3-Year Estimates, B01001

Among the older adult population in Travis County, 45,251 (56%) are females, and 35,159 (44%) are males. Females comprise a larger share of every age group.



Definition of Sex

The U.S. Census Bureau categorizes one's sex as "male" or "female" and it is based on one's biological attributes (chromosomes, anatomy, and hormones), and not their behaviors.

RACE & HISPANIC ORIGIN

The U.S. Census Bureau considers race and Hispanic origin as two separate and distinct concepts; therefore the data in the table below are presented as such. Since older adults who identify as having Hispanic origin can be of any race, they are represented in both the race and Hispanic origin categories. A majority (83%) of the older adult population in Travis County identifies as White, and 16% identify as Hispanic or Latino.

Race and Hispanic Origin Total Population 65 Years and Over, Travis County, 2010-2012 N=80,410				
Older Adult Population by Race	Estimate	Percent		
White Alone	66,736	83%		
Black Alone	6,424	8%		
American Indian and Alaska Native Alone	281*	0.3%		
Asian Alone	3,115	4%		
Some Other Race Alone	3,127	4%		
Two or More Races	727*	1%		
Older Adult Population by Hispanic Origin				
Hispanic or Latino	13,208	16%		
Not Hispanic or Latino	67,202	84%		
Older Adult Population				
Adults 65 Years and Over	80,410	100%		

^{*}Estimates are not reliable at a 90% confidence level.

Created by: Travis County HHS/VS, Research & Planning Division, 2014

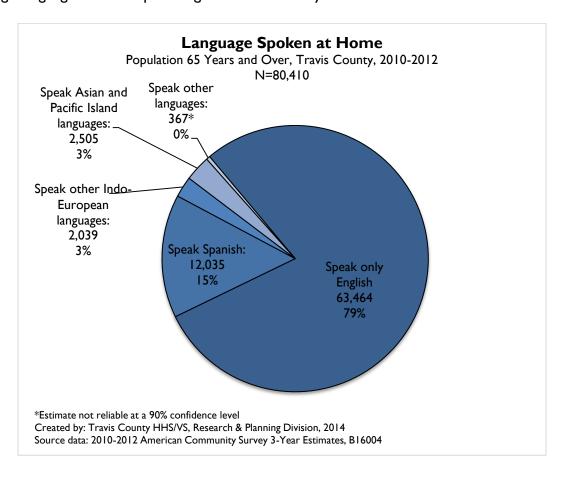
Source data: 2010-2012 American Community Survey 3-Year Estimates, B01001A-B010011

Definition of Race and Hispanic Origin

The racial categories included in the American Community Survey (ACS) reflect a social definition of race and are not an attempt to define race biologically, genetically, or anthropologically. The racial categories that include "alone" as part of the category refer to individuals who report in the ACS that they identify as being one race and no other race. Hispanic origin is viewed by the ACS as the heritage, nationality, lineage, or country of birth of the person, the person's parents, or ancestors before their arrival in the United States.

LANGUAGE

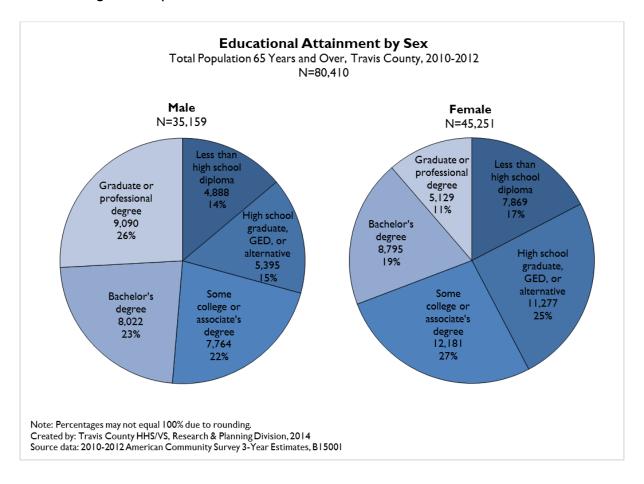
Of all the older adults in Travis County, 79% of them speak only English at home and 21% speak a foreign language in the home (the majority Spanish). Also, 53% (8,965) of those who speak a foreign language at home speak English less than "very well."



EDUCATIONAL ATTAINMENT

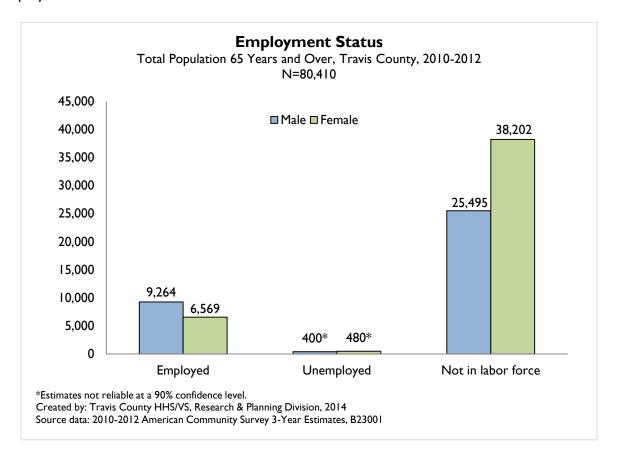
Among older adults in Travis County, males have higher educational attainment levels than females. 23% of males have a Bachelor's degree, compared to 19% of females; and 26% of males have a graduate or professional degree, compared to 11% of females.

Compared to state-wide and nation-wide averages, Travis County's older adult residents have higher educational attainment levels. 39% of Travis County older adults have at least a Bachelor's degree, compared to 22% of older Texans and 22% of older Americans.



EMPLOYMENT

The majority of older adults in the Travis County community are no longer in the labor force (79%). Of all older adults who are in the labor force (16,713), most of them (95%) are employed.



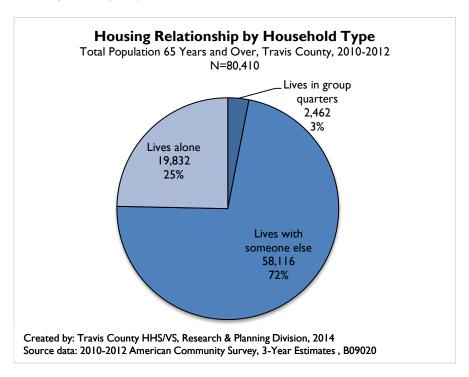
Employment Status

Individuals 16 years and over are considered **employed** if they worked during the reference week as paid employees, worked in their own or family business or farm, did 15 hours or more of unpaid work in a family business, or if they did not work during the reference week but had jobs or businesses from which they were temporarily absent. Individuals are considered **unemployed** if they did not work or did not have a job from which they were temporarily absent during the reference week, were actively looking for work during the last four weeks, and were available to start a job.

Individuals 16 years old and over who do not meet the criteria for employed or unemployed are considered **not** in the **labor force**. This category consists mainly of students, homemakers, retired workers, seasonal workers interviewed in an off season who were not looking for work, institutionalized people, and people doing only incidental unpaid family work (less than 15 hours during the reference week).

HOUSING

In Travis County, almost three-quarters (72%) of older adults live with someone else in the household and one-quarter (25%) live alone.



In Travis County, among housing units with householders aged 65 and over, 76% of the units are owner-occupied and 24% of them are renter-occupied. The U.S. Department of Housing and Urban Development states that families who pay more than 30% of their income for housing are considered to be cost-burdened and may have difficultly affording other necessities such as food or medical care. In Travis County, 28% (10,323) of older adult-headed owner households and 57% (6,698) of older adult-headed renter households have a housing cost burden.

Household Concepts

The U.S. Census Bureau categorizes all people not living in housing units as living in group quarters. A group quarter is a place that is owned or managed by an entity or organization that provides housing and/or services for the residents. Examples include residential treatment facilities, skilled nursing facilities, and group homes.

A householder is defined as the person, or one of the people, in whose name the home is owned, being bought, or rented. If there is no such person present, any household member 15 years old and over can serve as the householder.

¹ 2010-2012 American Community Survey 3-Year Estimates, B25007

² U.S. Department of Housing and Urban Development,

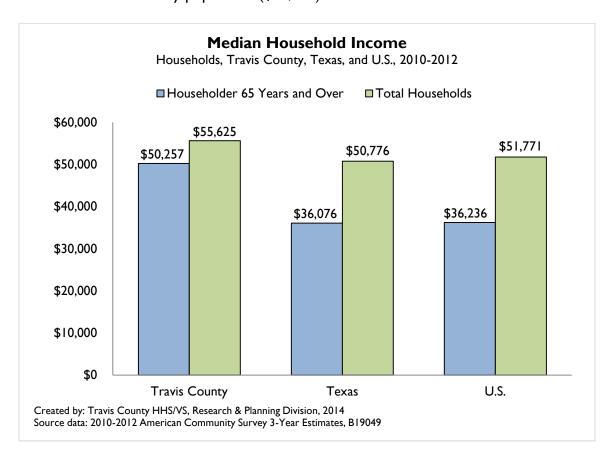
http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/affordablehousing

³ 2010-2012 American Community Survey 3-Year Estimates, B25093

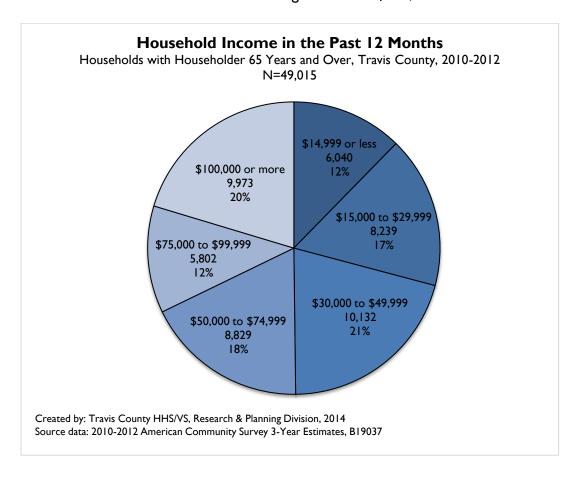
⁴ 2010-2012 American Community Survey 3-Year Estimates, B25072

INCOME

Older adults in Travis County have a higher median household income (\$50,257) than older adults statewide (\$36,076) and nationwide (\$36,236), but a lower median household income than the total Travis County population (\$55,625).

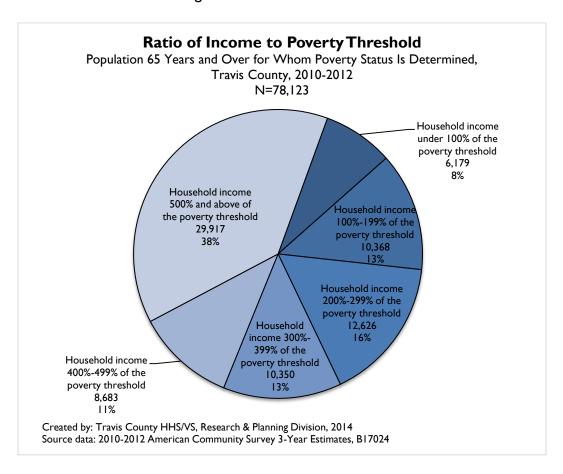


Almost one-third (29%) of all households with an older adult householder have an income less than \$30,000 and half have incomes less than \$50,000. On the other end of the spectrum, 20% of older adult headed households have incomes greater than \$100,000.



POVERTY

8% (6,179) of older adults in Travis County live below the poverty threshold, while about one-fifth (21%) live below 200% of the poverty threshold. In addition, 16% of all Travis County households that receive Supplemental Nutrition Assistance Program⁵ benefits have at least one resident in the household who is aged 60 or older.⁶



The table below provides information on the federal poverty thresholds for households of one and two residents from 2010-2012.

Federal Poverty Thresholds for 48 Contiguous States			
for Householders 65 Years and Over			
	2010	2011	2012
Household of I	\$10,458	\$10,788	\$11,011
Household of 2	\$13,180	\$13,596	\$13,878

Created by: Travis County HHS/VS, Research & Planning Division, 2014 Source data: U.S. Census Bureau 2010, 2011, 2012 Poverty Thresholds http://www.census.gov/hhes/www/poverty/data/threshld/index.html

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⁵ Supplemental Nutrition Assistance Program, http://www.fns.usda.gov/snap/supplemental-nutrition-assistance-program-snap

⁶ 2010-2012 American Community Survey 3-Year Estimates, B22001

Relative to the state and national ratios, there is a lower percentage of older adults in Travis County who live below 200% of the poverty threshold.

Ratio of Income to Poverty Threshold				
Population 65 Years and Over for Whom Poverty Status Is Determined Travis County, Texas, and U.S., 2010-2012				
Travis County Texas U.S				
Under 100% of the poverty threshold	8%	11%	9%	
100% to 199% of the poverty threshold	13%	23%	22%	

Created by: Travis County HHS/VS, Research & Planning Division, 2014 Source data: 2010-2012 American Community Survey 3-Year Estimates, B17024

Poverty Status

The U.S. Census Bureau updates the poverty thresholds annually to estimate the number of people in poverty. The methodology used to calculate threshold was developed in the 1960s. Although the thresholds are adjusted for inflation, the same methodology is currently in place despite shifting costs of household expenses. As a result, the thresholds may underestimate the number of people who face economic hardship.

The Wider Opportunities for Women organization calculated that in Travis County, an older adult couple that owned a home without a mortgage needs an annual income of \$32,052 to cover all expenses.⁷ That is almost two and half times the poverty threshold of 2012. Another resource for poverty information is the U.S. Census Bureau's Supplemental Poverty Measure (SPM). The SPM identifies thresholds that are guided by a more current methodology that takes into account geographical differences in cost of living.⁸

⁷ Elder Index Result, http://www.basiceconomicsecurity.org/El/location.aspx

⁸ U.S. Census Bureau Supplemental Poverty Measure, http://www.census.gov/hhes/povmeas/data/index.html

HEALTH INSURANCE

The vast majority (98%) of older adults in Travis County have some type of health insurance coverage; just 2% do not have any type of coverage. Of the older adults who have health insurance, 95% (73,991) are covered by Medicare and about three-quarters (77%) have two or more types of coverage.

Health Insurance Coverage Status and Type Civilian Noninstutionalized Population 65 Years and Over, Travis County 2010-2012 N=78,123			
Coverage Status	Estimate	Percent	
One type of coverage	16,487	21%	
Two or more types of coverage	60,079	77%	
No coverage	1,557*	2%	
Coverage Type	Estimate	Percent ¹	
Medicare	73,991	95%	
Employer-based ²	37,078	47%	
Direct-purchased	22,309	29%	
TRICARE/military	10,481	13%	
Medicaid/means-tested public coverage	10,271	13%	
VA health coverage	5,671	7%	

^{*}Estimate is not reliable at a 90% confidence level.

Created by: Travis County HHS/VS, Research & Planning Division, 2014

Source data: 2010-2012 American Community Survey 3-Year Estimates, B27001, B27004-10

^{1.} The percentages will not equal 100% because individuals might have more than one type of insurance.

^{2.} Employer-based insurance can be through a current or former employer or union of respondent or family member.

DISABILITY

Nearly one-third (33%) of Travis County older adults have at least one type of disability; nearly one in five older adults (19%) has two or more types of disability. Older adults are much more likely to have a disability than their younger counterparts—of Travis County adults aged 18 to 64, only 7% have a disability.

As shown in the table below, ambulatory difficulty is the most common type of disability, followed by independent living difficulty, and hearing difficulty.

Disability Status, Number, and Type Civilian Non-institutionalized Population 65 Years and Over, Travis County, 2010-2012 N=78,123			
Disability Status and Number	Estimate	Percent	
With a disability	26,112	33%	
With one type of disability	11,155	14%	
With two or more types of disability	14,957	19%	
Disability Type	Estimate	Percent	
With an ambulatory difficulty	17,272	22%	
With an ambulatory difficulty With an independent living difficulty	17,272 12,486	22% 16%	
, ,	· ·		
With an independent living difficulty	12,486	16%	
With an independent living difficulty With a hearing difficulty	12,486	16%	

Created by: Travis County HHS/VS, Research and Planning Division, 2014

Source data: 2010-2012 American Community Survey 3-Year Estimates, C18102-08

Disability Status

Disability types are defined by the American Community Survey as the following:

- Ambulatory Difficulty: having serious difficulty walking or climbing stairs
- Independent Living Difficulty: because of a physical, mental, or emotional problem, having difficulty doing errands alone such as visiting a doctor's office or shopping
- Hearing Difficulty: deaf or having serious difficulty hearing
- Cognitive Difficulty: because of a physical, mental, or emotional problem, having difficulty remembering, concentrating, or making decisions
- Self-Care Difficulty: having difficulty bathing or dressing
- Vision Difficulty: blind or having serious difficulty seeing, even when wearing glasses

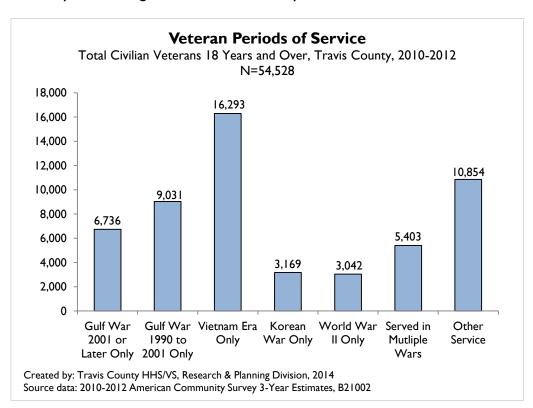
VETERANS

In Travis County, the share of Veterans is much larger among the population aged 65 and over than the population aged 64 and under. Nearly one out of four older adults is a Veteran. Among the population aged 18-64 years, just 5% have Veteran status.

Veteran Status Civilian Population 18 Years and Over, Travis County, 2010-2012 N=808,765						
64 Years and Under 65 Years and Over						
Status	Estimate	Percent	Estimate	Percent		
Veteran	35,541	5%	18,987	24%		
Nonveteran	692,814	95%	61,423	76%		
Total Population 728,355 100% 80,410 100%						

Created by: Travis County HHS/VS, Research & Planning Division, 2014 Source data: 2010-2012 American Community Survey 3-Year Estimates, B21001

Of the civilian Veterans 18 years and over in Travis County (54,528), there is a variety in their periods of service. The periods of service that have the largest groups of individuals are those likely to include older adults: 30% served in the Vietnam Era only, followed by 20% who served during the period of Other Service, which includes service between the Gulf War and Vietnam Era only, between the Vietnam Era and Korean War only, between the Vietnam Era and Korean War only, and during Pre-World War II only.



GEOGRAPHIC CONCENTRATIONS

The following maps provide a visual illustration of the older adult population by ZIP code tabulation area (ZCTA). The first map displays the number of residents aged 65 and over living in each ZCTA. The corresponding data table also includes information about the percentage of the ZCTA's total population comprised of older adults. The second map displays the number of residents aged 65 and over with incomes at or below 200% of the poverty threshold (\$22,022 for one person; \$27,756 for a family of two in 2012). The corresponding data table also indicates what share of the older adult population in the ZCTA has an income below 200% of the poverty threshold.

DATA SOURCE

While the majority of this report utilizes data from the 2010-2012 American Community Survey (ACS) 3-Year estimates, these estimates are only available for geographic areas with populations of 20,000 or greater. Thus the maps utilize data from the 2008-2012 American Community Survey 5-Year Estimates, which are available for geographic areas of almost any size. For more information about multi-year estimates see

http://www.census.gov/acs/www/guidance_for_data_users/estimates/.

RELIABILITY

Because ACS estimates are based on data gathered from samples rather than entire populations, they all have a margin of error. The margin of error increases as the population size decreases; therefore, data for smaller geographic areas such as ZCTAs often has a high margin of error. Estimates included in the maps have been tested at a 90% confidence level for reliability. This test involves calculating the coefficient of variation (CV), using the margin of error. The estimates in the maps have been categorized as follows based on the value of the CV:

Reliable: CV≤15%

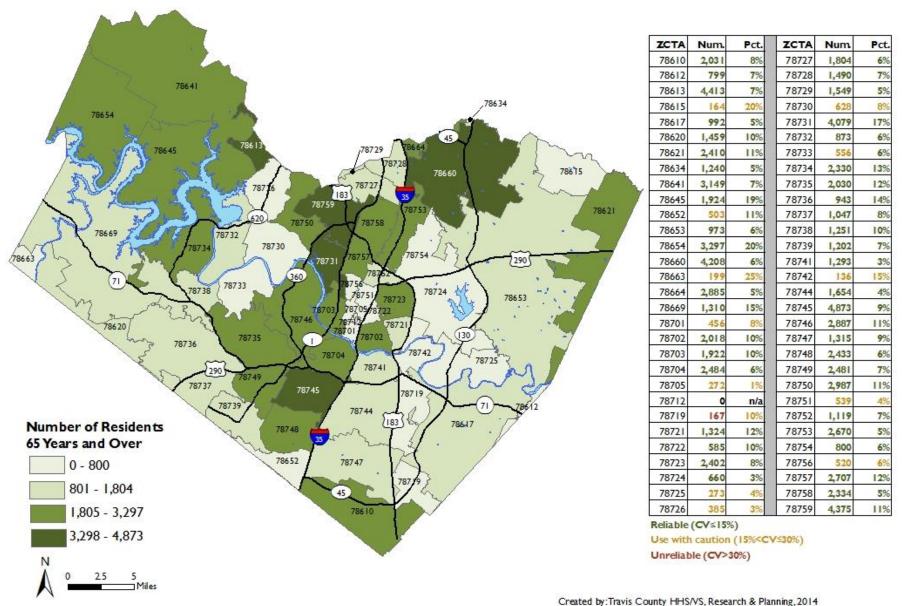
Use with caution: I5%<CV≤30%</p>

Unreliable: CV>30%

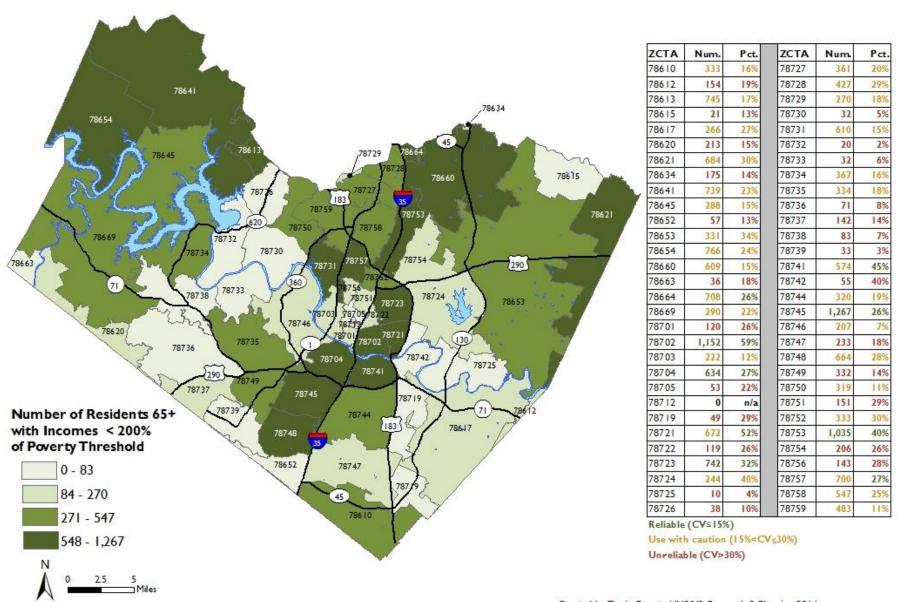
ZIP CODE TABULATION AREAS

This geography is slightly different from the U.S. Postal Service ZIP codes used for mail service, with which the public is likely more familiar. There is no correlation between ZIP codes, which are maintained by the U.S. Postal Service, and geographies used by the U.S. Census Bureau to tabulate census data (such as state, county, census tract, and block group). U.S. Census Bureau geographies are relatively stable over time, while U.S. Postal Service ZIP codes are designed to meet the day-to-day operational needs of mail service, tend to change more frequently, and often cross the boundaries of Census Bureau geographies. To overcome difficulties in defining the land area covered by each U.S. Postal Service ZIP code, the U.S. Census Bureau created the ZIP code tabulation area as a statistical geographic entity. They are built by aggregating census blocks, whose addresses use a given ZIP code; each resulting ZIP code tabulation area is then assigned the most frequently occurring ZIP code. Thus they represent the most frequently occurring five-digit ZIP code found in a given area. For more information about ZCTAs, see https://www.census.gov/geo/reference/zctas.html.

Population 65 Years and Over ZIP Code Tabulation Areas (ZCTAs), Travis County, 2008-2012



Population 65 Years and Over With Incomes < 200% of the Poverty Threshold ZIP Code Tabulation Areas (ZCTAs), Travis County, 2008-2012



Created by:Travis County HHS/VS, Research & Planning, 2014 Source data: 2008-2012 Amercian Community Survey 5-Year Estimates, B17024

METHODOLOGY

ABOUT THE AMERICAN COMMUNITY SURVEY

The American Community Survey (ACS) replaces the long form of the 10-year U.S. Census and collects information on an ongoing basis rather than once every 10 years. The survey includes questions about demographic, housing, social, and economic characteristics.⁹

The ACS employs continuous data collection and produces annual results. Data based on a 1-year sample is available for all areas of 65,000 or more, data based on a 3-year sample is available for all areas of 20,000 or more, and data based on a 5-year sample is available for populations of almost any size.

The terms used in this report's narratives and charts mirror those used by the U.S. Census Bureau. For more information on U.S. Census Bureau terminology, please visit its glossary at: http://www.census.gov/glossary/.

AMERICAN COMMUNITY SURVEY METHODOLOGY

Sample: The ACS consists of two separate samples: one for persons living in a housing unit and one for persons living in group quarters. Examples of group quarter residents include people living in nursing homes, correctional facilities, college/university housing, and military barracks. Each year, approximately 3 million housing unit addresses and approximately 200,000 residents in group quarters facilities are selected among each of the 3,142 counties and county-equivalents in the U.S. An address will not be included in the ACS more than once in a 5 year period.¹⁰

For Travis County, the original 2010-2012 3-year sample of initial addresses selected was 25,973, and the final number of housing unit interviews (actual sample used to produce results) was 17,094. The group quarters population sample is not available at the county level.

Data collection: The ACS is conducted primarily through self-response. Data is collected from 12 monthly, independent samples. The ACS employs two distinct data collection methodologies: one for individuals residing in housing units and another for those residing in group quarters. For participants residing in housing units, three attempts are made to administer the survey: (I) by mail, which includes separate mailings of a pre-notice letter, the ACS questionnaire, reminder postcard, and replacement questionnaire if needed; (2) by phone, on a sample of addresses that have not returned the completed paper questionnaire and for which a telephone number is known; and finally (3) by personal interviews with a sample of remaining addresses. For persons in group quarters, data collection occurs first through U.S. Census Bureau contact with a group quarters facility administrator and then through an interview with a sample of

⁹ A sample questionnaire can be found at: http://www.census.gov/acs/www/Downloads/questionnaires/2013/Quest13.pdf

¹⁰ More information on American Community Survey (ACS) methodology is available at: http://www.census.gov/acs/www/Downloads/survey_methodology/Chapter_4_RevisedDec2010.pdf

U.S. Census Bureau, 2010-2012 American Community Survey 3-Year Estimates, Table B98001: Unweighted Housing Unit Sample

individuals from the facility. Sampling and data collection for group quarters varies by the group quarter's size. 12

LIMITATIONS

Sampling error: Because the findings are based on a sample, rather than the entire population, the results would differ slightly if another sample were drawn or if the entire population were surveyed. This reduces the reliability of the results. A certain amount of variability (called sampling error) is associated with any estimate based on a sample. In general, the larger the sample size, the smaller the sampling error.¹³ For this report, the authors have attempted to minimize this variability by using the 3-Year Estimates and by using the published margins of error to test all estimates and derived estimates for reliability at a 90% confidence level. Estimates with coefficients of variation¹⁴ of more than 15.00 were footnoted as being unreliable.

Statistical significance: When direct comparisons are made (for example, between geographic areas or subgroups), tests have been performed for statistical significance at a 90% confidence level. Note that testing was not conducted on every possible permutation of comparisons between visible figures in this report's charts and tables, so inferences about statistics and trends should be interpreted with caution.

For more information and instruction on testing for reliability and statistical significance, as well as general guidance on how to use ACS data, please see the Compass guides published by the U.S. Census Bureau: www.census.gov/acs/www/guidance for data users/handbooks/.

Non-response error: If certain individuals do not respond to the survey, the strength of the findings will be weakened. Additionally, those who respond to the survey may possess certain traits that skew the results differently than if everyone in the sample responds; this is known as selection bias. However, while surveys are often voluntary, response to the ACS is required by law (Title 13, United States Code, Sections 141 and 193) and those who refuse or willfully neglect to respond to the survey are subject to a fine of up to \$5,000.¹⁵ Thus the response rate for the ACS is high (the 2012 response rate for Texas was 97% for housing units and 94.8% for group quarters).¹⁶

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 $^{^{\}rm I2}$ U.S. Census Bureau, ACS Design and Methodology (Ch.4),

http://www.census.gov/acs/www/Downloads/survey_methodology/Chapter_4_RevisedDec2010.pdf

13 U.S. Census Bureau, A Compass for Understanding and Using American Community Survey Data: What State and Local Governments Need to Know. U.S. Government Printing Office, Washington, DC, 2009, www.census.gov/acs/www/guidance_for_data_users/handbooks/

¹⁴ Coefficient of variation is a measure used to discern the level of reliability of an estimate. It is calculated using the estimate and its standard error. For more information on calculating and using coefficients of variation, see: A Compass for Understanding and Using American Community Survey Data: What State and Local Governments Need to Know, available at www.census.gov/acs/www/guidance for data users/handbooks/

¹⁵ U.S. Census Bureau, Frequently Asked Questions, available at: https://ask.census.gov/faq.php?id=5000&faqId=7455

¹⁶ Response rate information is available on the Census Bureau's website, available at: http://www.census.gov/acs/www/methodology/response_rates_data/index.php